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RESEARCH
SUMMARY

I am an Assistant Professor in the Department of Economics at Ohio State University, and Research Fellow at the Institute for the Study of Labor (IZA). My research in health and labor economics focuses on empirical, policy-relevant questions related to the design and value of health insurance plans, the estimation of compensating wage differentials, the determinants of job mobility, impacts of non-competition contracts, and physician labor markets and organizations.

A. Health Insurance Design and Value

I currently have three publications (including forthcoming articles) and five working papers related to health insurance design and estimating the value of health insurance. I have also made substantial investments in the construction of a new database in this research area, upon which my ongoing and future research objectives are heavily based.

Selection and Insurance Design in Medicare Part D Drug Insurance Markets

The first two publications:

> Lavetti, K. and K. Simon (2018) "Strategic Formulary Design in Medicare Part D Plans," _American Economic Journal: Economic Policy_, Forthcoming August 2018.

> Han, T. and K. Lavetti (2017) "Does Part D Abet Advantageous Selection in Medicare Advantage?" _Journal of Health Economics_, Vol. 56 (Dec. 2017) pp. 368-382.

study insurance design in the context of public provision of private insurance benefits, focusing on the Medicare Part D prescription drug insurance market. These two papers are among the first empirical papers that have been able to directly test the hypotheses of the classic Rothschild and Stiglitz (1978) model of selection in insurance markets. Both papers study how the introduction of drug insurance benefits in Medicare changed the nature of competition between publicly and privately-delivered Medicare insurance plans in ways that have the potential to affect consumer welfare. The decision by Congress to privately deliver Part D benefits led to fragmentation of health insurance for enrollees in traditional Medicare (who receive public hospital and physician insurance and private drug insurance), whereas beneficiaries in Medicare Advantage (MA) plans have fully-integrated private coverage that insures all components of healthcare.

In the first paper, Lavetti and Simon (2018), we point out that the decision to offer consumers a choice between fragmented or integrated insurance plans creates market distortions due to differential adverse selection, where integrated plans may use drug benefit designs to induce enrollment by patients who are profitable in the hospital insurance market, while stand-alone drug plans have no such selection incentive. Using the universe of Medicare enrollees and Part D formularies, we estimate heterogeneity in drug-level selection incentives between stand-alone and integrated plans. We then test whether the difference in selection incentives between plan types causes insurers to alter the benefit designs of the plans they offer. We find that, relative to fragmented insurance plans owned by the same parent company, integrated plans respond to the differential selection incentives by systematically designing their insurance benefits to induce self-selection by beneficiaries with medical conditions that are more profitable under Medicare Parts A & B. However, we also show that integrated plans more generously cover drugs that are likely to causally reduce medical costs, potentially creating welfare gains that may counteract any losses from selection.

The second paper, Han and Lavetti (2017), builds on this work to study consumer responses to these differences in plan design. We show that there was an abrupt and large increase in advantageous selection into integrated MA plans immediately in 2006, when Part D formularies began allowing insurers to more precisely target consumers of particular drugs. We show that the increase in selection was isolated to beneficiaries with medical conditions that tend to be more profitable for plans (for technical, but fairly exogenous, reasons related to risk-adjustment in payments to insurers). Overall, we find that the selection incentives created by the decision to offer consumers a choice between fragmented or integrated private Medicare insurance benefits caused a change in advantageous selection that increased the probability of enrolling in an integrated MA plan by about 7.7%, shifting about $8 billion in annual spending to these private insurance plans.

Estimating the Value of Health Insurance

I have one publication and four working papers related to the value of health insurance. In:

> Lavetti, K., K. Simon, and W. White (2014): "Taxpayer Willingness-to-Pay for Health Insurance Reform: A Contingent Valuation Analysis," *Economic Inquiry*, Vol. 52, No. 3 (July 2014) pp. 944-1013.

we conducted a longitudinal survey to estimate individual willingness to pay for expansions of public health insurance. Conveniently, the first round of the survey was conducted in 2008 and the second round was after the passage of the Affordable Care Act and the onset of the Great Recession. We use these two events to estimate how labor market circumstances, health status and insurance coverage, and political ideology contribute to within-respondent changes in willingness to pay for public health insurance coverage. The findings suggest that political ideology played a stronger role in affecting willingness to pay than did the economic or health conditions, such as losing one's job or health insurance, that tend to be correlated with enrollment in safety net programs. Using stated survey-based estimates as a measure of the benefits of public health insurance, we estimate that an expansion of public health insurance eligibility would increase welfare.

My more recent, ongoing work in this area focuses on a unique new comprehensive longitudinal health insurance database that I spent several years constructing as part of a grant from the Robert Wood Johnson Foundation, on which I was the principal investigator. The database is the first known resource that links (1) the universe of hospital discharge records for every person in a state over two decades to (2) all-payer private insurance claims database containing the complete health care claims records for every commercially insured person over nine years to (3) administrative records for every application and enrollment spell in the state Medicaid program, including W-2 earnings records and household structures from administrative applications, and to (4) Social Security Administration death records. Working closely with the Utah Office of Healthcare Statistics, I helped design linkages and obtained approval to access this extremely unique database, which effectively creates a 24-year view of the life-cycle of individual healthcare and utilization for every person in the state of Utah. The large investment in this data resource represents the cornerstone of my future research agenda in this area.

My first working paper using these data, "Health Persistence and the Ex Ante Value of Medicaid as a Safety Net" is joint work with Amanda Kowalski. The primary objective of this paper is to estimate the population distribution of willingness to pay for Medicaid. Using the unique feature of the Utah database that allows us to track first-time Medicaid applicants for many years prior to their initial application, we estimate the medium- to long-run joint dynamics of health diagnosis shocks, healthcare spending, and health insurance status for the full state population. The novelty of being able to observe these dynamic processes is that we can estimate the insurance value of Medicaid as a safety net to individuals who have never enrolled in Medicaid, and who may have contemporaneous characteristics that appear to make them unlikely to enroll in Medicaid. In contrast, prior research on this question has focused on estimating local average treatment effects of Medicaid enrollment, focusing on the eligible or near eligible population. Aggregating willingness to pay over only eligible enrollees

could potentially understate the total benefits of public health insurance safety nets if individuals away from the eligibility margin also value insurance again shocks that could subsequently cause them to become eligible. We also estimate the extent to which using short panels to estimate health spending dynamics could understate the value of public health insurance by failing to fully capture the long-run persistence of health, which increases the value of the safety net. Presentation slides for this project are available at www.kurtlavetti.com/medicaid_kl.pdf

Second, ongoing work with Ben Handel, Jon Holmes, and Jon Kolstad, "Insurer Innovation and Health Care Efficiency: Evidence From Utah" seeks to provide new empirical evidence on a fundamental question about efficient delivery of health care: should more incentives be placed on individual consumers—through demand side insurance design—or on doctors providing care—through supply side design? Despite the importance of this question for the aggregate US economy and healthcare system, there is little evidence on the relative impacts of these different approaches that is estimated *within the same market*. Using the Utah database, we study the effects of a set of natural experiments in which employers force all of their workers to switch health insurers. We show that shifts between insurers dramatically alter total health care spending as well as the underlying way in which care is produced. We estimate the extent to which changes in spending are caused by differences in quantities of care or negotiated prices, as well as evaluating heterogeneity in effects for potentially high value healthcare, such as drug spending for individuals with chronic conditions, and low value care. We then estimate variation in insurer productivity and the normative welfare effects of insurer assignment. Presentation slides for this project are available at www.kurtlavetti.com/innovation_hhkl.pdf

The third working paper, "The Dynamic Efficiency of Changes in Medicaid Generosity," is a collaboration with Nicolas Ziebarth. In it, we use the Utah database to study a key question in health economics: is increasing the generosity of basic public health insurance, such as Medicaid, dynamically efficient? Because of the difficulty in obtaining longitudinal records over the life cycle, there is almost no causally-identified research on this question beyond short-run effects. We estimate the effect of a unique Medicaid expansion that took place in Utah in 2002, which created a substantially less generous public health insurance option. For certain individuals, this new program created a sharp discontinuity in assignment to different public health insurance plans at the income level corresponding to 55% of the federal poverty line. Using administrative Medicaid applications linked to W-2 income and household structures, we estimate the effect of having income on either side of the discontinuity at the time the program was initially implemented. We test for impacts of initial program assignment on the trajectory and continuity of health insurance coverage, and also compare health outcomes, utilization, and intertemporal spending substitution for differently-assigned individuals who were enrolled in the same ACA exchange plans, holding contemporaneous insurance generosity fixed, 12 years later. We find surprising new evidence suggesting strong persistence in the way that individuals interact with healthcare providers. When subsequently enrolled in the same ACA exchange plan a decade later, enrollees who lacked coverage for specialist care in 2003 continued to use specialists less frequently than individuals on the other side of the discontinuity.

Fourth, Thomas DeLeire, Nicolas Ziebarth, and I estimate the effects of ACA cost-sharing subsidies on healthcare utilization among low-income adults in Utah. This study contributes to the understanding of how variation in health insurance generosity on the intensive margin affects healthcare utilization choices among the low-income population. The research design leverages abrupt discontinuities in the actuarial values of ACA exchange plans at thresholds of the poverty line. Moreover, since we are able to track individuals longitudinally prior to their enrollment in ACA plans, we can control for prior health status to correct for potentially endogenous plan selection. We estimate an overall elasticity of demand of -0.13 in this low-income population, and show that emergency room utilization and low-value medical care are particularly sensitive to cost-sharing. We estimate that if cost-sharing subsidies were eliminated, low-income enrollees would receive 29% less healthcare, with disproportionately large cuts affecting the youngest and sickest populations.

B. Estimating Compensating Wage Differentials and the Determinants of Job Mobility
My second main area of research advances a classic topic in labor economics—the estimation of com-

pensating wage differentials, or implicit tradeoffs between wages and other job amenities for which there is no direct market. The three papers I have written on this topic all focus on extending the framework for identifying compensating wage differentials to the context of longitudinally matched employer-employee data. My work highlights a fundamental tradeoff in this literature associated with using panel data to reduce bias caused by unobserved worker or establishment characteristics, which is that panel data models restrict identifying variation to a component that is driven by workers' job mobility decisions, which are themselves potentially endogenous. My first paper on this topic,

> Lavetti, K. (2018): "The Estimation of Compensating Wage Differentials: Lessons from the Deadliest Catch," *Journal of Business & Economic Statistics*, forthcoming 2018.

takes advantage of a unique labor-market setting to diagnose and correct problems associated with the nonrandom assignment of workers to establishments. I conduct an original survey of commercial fishing deckhands in the Alaskan Bering Sea, and construct matched employer-employee linkages from survey responses. The unique features of this labor market are (1) large intertemporal variation in fatality rates caused by a combination of seasonal weather patterns and policy changes, and (2) the use of short-term spot revenue-sharing contracts between workers and vessels, which are renegotiated frequently and cause hourly earnings to vary more than two-fold within the same worker-vessel pair across seasons. These features make it possible to estimate an empirical model that allows for arbitrary unobserved heterogeneity in worker ability, firm productivity, and/or idiosyncratic match complementarities between each worker-vessel pair. In doing so, this estimation approach is robust to any static form of nonrandom assignment between workers and firms, eliminating the threat of bias caused by potentially endogenous job mobility decisions, as well as many forms of labor market search frictions. I demonstrate that common estimation approaches used in the literature produce substantially biased results in this setting, and decompose the bias components due to unobserved worker, firm, and job-match heterogeneity to provide insights on the underlying channels of bias, and the relative magnitudes and directions of each bias component.

The second working paper, "Estimating Compensating Wage Differentials with Endogenous Job Mobility," which is joint with Ian Schmutte, addresses similar estimation challenges, but develops a general methodological approach to evaluating them in any labor market in which matched longitudinal employer-employee data are available. The key intuition is that using information on the full network structure of a labor market allows one to condition on worker and establishment identity. We show empirically that doing so captures the empirical determinants of job mobility quite well, reducing biases associated with labor market frictions and potentially endogenous decisions by workers to switch jobs. We develop a search-based theoretical framework to show the conditions under which our proposed method can identify preferences for safety, helping to narrow a conceptual gap between search-based hedonic wage theory and its empirical applications. We then implement the method to estimate compensating wage differentials for occupational fatality risk using the complete census of all men in Brazil between 2003-2010, and conclude that within-worker estimates of compensating wage differentials are biased downward by nearly an order of magnitude because of the endogeneity of job mobility decisions. Both of these papers also find evidence suggesting that workers' marginal aversion to fatal risk falls as risk levels rise, suggesting the potential presence of complementarities in benefits across public policies that reduce mortality rates.

Finally, Ian Schmutte and I extend these analyses in:

> Lavetti, K. and Ian Schmutte (2018): "Gender Differences in Sorting on Occupational Safety and Establishment Pay," *Revise & Resubmit at The Economic Journal.*

to study how patterns of job mobility on the basis of wages and occupational safety differ for men and women in Brazil. We provide new empirical evidence depicting how differently women and men sort through the labor market when originating at similar jobs. Despite the starkly disparate patterns of sorting, we show that after correcting for selection into jobs on the basis of unobserved establishment heterogeneity, the implied compensating wage differential for fatal risk is identical for

men and women, contrary to many prior studies. We quantify the implications of these differences in sorting on the gender wage gap. Although the direct effect of compensating differentials on the wage gap is small, there are also indirect effects on wages that operate through the assignment of workers to establishments. We estimate that establishment assignment explains 1/3 of the overall gender wage gap in Brazil, and show that the segregation of male and female workers across establishments is strongly correlated with the gender gap in occupational safety. Quantifying the extent to which multidimensional sorting on occupational safety and establishment heterogeneity in pay contribute to the expansion of gender wage disparities over the career, we show that the gender gap in sorting depends heavily on education. Although the wage gap is smallest among college educated workers, the majority of this gap is explained by sorting patterns that lead men to work disproportionately in establishments that pay all workers, including women, higher wages. In contrast, among less-educated workers the gender wage gap is larger overall, but most of the gap is evident immediately age 25, suggesting that it is driven more by factors that affect initial labor market assignment, such as preferences, skills, or broad-based gender discrimination that does not attenuate over time through sorting.

C. Physician Organization and Competition

This line of research, in which I have two working papers, studies physician organizations and competition. Both papers specifically relate to the use of non-compete agreements (NCAs) in the employment contracts of physicians, which prohibit physicians from leaving a group practice and then competing against it.

In the first paper,

> Lavetti, K., Carol Simon, and W. White (2018): "The Impacts of Restricting Mobility of Skilled Service Workers: Evidence from Physicians", Fourth round revisions submitted to the *Journal of Human Resources*.

we conduct an original survey of nearly 2,000 primary care physicians across 5 states to create the first dataset in which it is possible to observe which physicians have signed NCAs, linked to information about labor market outcomes, practice organizational structure, and firm financial performance. We show a wide range of evidence that physician practices use NCAs to overcome an investment holdup problem associated with the threat that physicians who leave a practice may poach patients. By removing this threat of poaching, practices that use NCAs make larger investments in their workers, which leads to substantially higher earnings and faster rates of earnings growth. This suggests that among high skilled workers, NCAs, although they appear at face value to be harmfully restrictive to workers, may actually increase productivity and benefit workers.

The second paper,

> Hausman, Naomi and Kurt Lavetti (2018): "Physician Concentration and Negotiated Prices: Evidence from State Law Changes", *Revise & Resubmit at the American Economic Journal: Applied Economics*.

we construct a new database of every state-level Supreme Court decision that altered the quantifiable enforceability of NCAs from 1991-2009. We use this database of state judicial decisions as instruments that alter the organizational incentives of physician groups to estimate the causal effect of physician practice sizes on prices negotiated with private insurers. This is an inherently empirical exercise, because there are two theoretically opposing effects. Larger practices could benefit from economies of scale, reducing average costs; insurers, knowing this, could extract these cost savings in bilateral private bargaining over prices. On the other hand, larger physician practices may be more valuable to insurers from a network-design perspective, improving the bargaining position of practices and leading to higher negotiated prices. We link a database containing negotiated prices nationwide from hundreds of millions of health claims records into administrative data containing a complete longitudinal census of physicians in the US from the Centers for Medicare and Medicaid, and into the confidential Census

Bureau Longitudinal Business Database, containing the IRS tax identifiers, annual sales, and annual payroll for every establishment and every firm in the country. Using the law changes as IVs, we conclude that when physician groups grow by increasing the size of *establishments* negotiated prices fall, but when practices grow by jointly negotiating *across physically distinct establishments* negotiated prices rise. This finding suggests that physical consolidation of establishments is predictive of the impact of physician practice mergers on consumer prices.